

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1. - 22. (Canceled)

23. (Currently Amended) An automatic analyzer that analyzes samples using parts arranged in part racks, comprising:

a supply lifter configured to receive a plurality of part racks holding unused parts, said supply lifter being mounted for vertical movement and positioned to raise the part racks to a rack separation station, while keeping the part racks stacked together;

a rack separator located at the rack separation station able to separate an uppermost part rack of said part racks from remaining said part racks so as to retain the separated uppermost part rack at said rack separation station;

a recovery lifter positioned to be able to receive the separated part rack following processing, said recovery lifter being mounted for vertical movement to move the separated part rack downward for recovery;

a laterally movable table having the supply lifter and the recovery lifter mounted thereon;

a first rack position sensor positioned to sense the uppermost one of the part racks;

a second rack position sensor positioned to sense a second part rack located under the uppermost one of the part racks in the vicinity of said rack separation station; and

a controller means for determining whether or not said uppermost part rack has been properly separated from the other part racks on the basis of sensed information received from said first and second rack position sensors, the controller means including means for judging whether to continue operation or interrupt the operation based on determination of whether said uppermost part rack has been properly separated.

24. (Currently Amended) An automatic analyzer that analyzes samples using parts disposed in part racks, comprising:

a supply lifter configured to receive a plurality of part racks, said supply lifter being mounted for vertical movement and positioned to raise the plurality of part racks to a rack separation station, while keeping the part racks stacked together;

a rack separator located at the rack separation station able to separate an uppermost one of the stacked part racks so as to leave the uppermost part rack at the rack separation station;

~~one or more plural~~ sensors positioned to sense whether the uppermost part rack has been properly separated from said stacked part racks; and

a controller means for determining whether to continue operation of the analyzer or interrupt operation of the analyzer based upon information received from said ~~one or more~~ plural sensors.

25. (Currently Amended) The automatic analyzer according to claim 24, further including

a laterally moveable table, wherein said supply lifter and said moveable table are housed in an enclosed rack lift chamber, and said movable table is slideably mounted to move out of the rack lift chamber through a door, whereby an operator is able to pull the moveable table out of the rack lift chamber to add part racks holding parts to said supply lifter while said analyzer continues to analyze samples.

26. (Previously Presented) The automatic analyzer according to claim 24, further including

a recovery lifter mounted for vertical movement and positioned to receive part racks following use;

a first belt and first motor for controlling the position of the supply lifter, and

a second belt and a second motor for controlling the position of the recovery lifter independently of the supply lifter.

27. (Previously Presented) The automatic analyzer according to claim 24, wherein
said supply lifter is mounted on a movable table housed in a rack lift chamber
having a door, said door including a lock,

wherein said controller means includes means for automatically locking said
door while said supply lifter is in operation for preventing access to said rack lift
chamber, and

wherein said controller means further includes means for unlocking said lock
to enable said door to be opened when said supply lifter is in an inactive position,
whereby part racks may be added while said analyzer is able to continue to analyze
samples.

28. (Currently Amended) The automatic analyzer according to claim 24, further
including

an alarm means for notifying an operator when a quantity of part racks
remaining on said supply lifter has reached a predetermined minimum quantity
threshold, as calculated by said controller means by counting a number of pulses
transmitted to a motor controlling said supply lifter when lowering said supply lifter
from a highest position to a lowest position.

29. - 38. (Canceled)